Comet's Radio Page!!!!

New

Oppskrift på beam ant for 27 Mhz
Scanner og frekvenser for Norge

Modification for Alan 78 plus

Radio Modifications

Modifications For: President Lincoln

Modifications for Presiden George:

How to change to the international configuration 240 ch, 15 W AM/FM, 21 W SSB.

Programming:

a)Turn your set on by pushing POWER.
b)Turn your set off by pushing POWER.
c)Depress POWER and keep pressed down.Your set goes on and then goes off.
d)Keep POWER depressed and press PA and DIMMER simultaneously.
e)Release POWER while keeping PA and DIMMER pressed down:"codE" flashes in the display for 5 seconds.
f)"codE" disappears and the display remains lit up.
g)Release PA and DIMMER.
h)Press M1, the display goes out.
i)Enter Your access code, then press POWER. Your set is now the international configuration.

Available functions in the international configuration:

DIMMER

In the international configuration only, the DIMMER key allows change band, thereby giving you the use of 240 channels.
A short depression allows you to advance by one band at a time - A B C D E F A... (6 bands, 40 channels)
A longer depression allows you to do the same thing in reverse - F E D C B A F ...

SELECT:

This key allows you to go up or down by 5 KHz at a time around the reference channel. It it used in conjunction whit the "CH(up) " y "CH (down)" keys.

How to return to the French norm 40 channels,4 W peak AM/FM/SSB

a)Turn your set on by pushing POWER.
b)Turn your set off by pushing POWER.

c)Depress POWER and keep pressed down.Your set goes on and then goes off.
d)Keep POWER depressed and press PA and DIMMER simultaneously.
e)Release POWER while keeping PA and DIMMER pressed down:"codE" flashes in the display for 5 seconds.
f)"codE" disappears and the display remains lit up.
g)Release PA and DIMMER.
h)Press PROGRAM: the sidplay goes off.
i)Enter your access code, then press POWER. Your set is now in the French configuration.

How to return to 40 channels, 4W FM

a)Turn your set on by pushing POWER.
b)Turn your set off by pushing POWER.
c)Depress POWER and keep pressed down.Your set goes on and then goes off.
d)Keep POWER depressed and press PA and DIMMER simultaneously.
e)Release POWER while keeping PA and DIMMER pressed down:"codE" flashes in the display for 5 seconds.
f)"codE" disappears and the display remains lit up.
g)Release PA and DIMMER.
h)Press M3:the sidplay goes off.
i)Enter your access code, then press POWER. Your set is now in 40 channels 4W FM configuration.

More modification to George

When executing the sequence for International mode, instead of pressing M1 press the mode button to get UK 40 channel 4w FM.

Disply Test For President George:

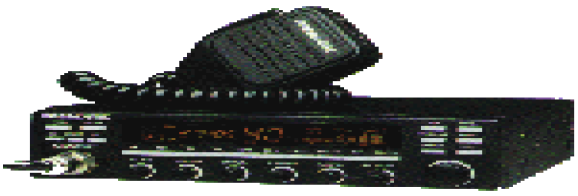
a)Turn your set on by pushing POWER.
b)Turn your set off by pushing POWER.
c)Depress POWER and keep pressed down.Your set goes on and then goes off.
d)Keep POWER depressed and press M1 and CH19 simultaneously.
e)Release POWER while keeping PA and DIMMER pressed down:"codE" flashes in the display for 5 seconds.
f)"codE" disappears and the display remains lit up.
g)Then press POWER. All functions come's up in the display.Press M1 to international configuration.

If anyone can supply me with more code's for George, please mail me!

If anyone requires Modifications for Cb-Radio Mail Me!

I have Modifications for Most Radios, But I Haven't the Time To Write them all in This Page..

President's Homepage



Cte International's Hompage

Homer's mods
More modifications

My Rig:

Tx/Rx: President George 240 ch, 30 W AM/FM, 40 W SSB
Tx/Rx: Alan 78 +u ,400 ch , 4w Fm
Antenna: Cbs 18 (1/2 wave ant. 9.9 db gain)
Mic: Sadelta Echo Master Pluss Classic

Other Modifciations

- Cobra 148GTL-DX (Late) / Superstar 360 Fm
- Galaxy 99
- Mc 145 106 Pll
- Ranger RCI 1295 (old/new)
- AH-100 Cherokee
- Emperor 5010
- MB8719 Pll
- Pll 02A
- Uniden HR2510
- Midland 79-290

Expanding the MB8719

Models include:- Uniden Grant/Madison, Cobra 148/2000 GTL etc.

Note: Some newer Uniden's now have RCI 18719 "clone" PLL. You will have to replace the PLL with the old MB 8719 BEFORE attempting these mods.

To get coverage from 27.455 - 28.045, find the MB 8719 PLL, then locate pins 10, 11 and 12.Cut the

track going to these pins. Locate a ground (chassis or track). Using a DPDT Center off switch, Connect the switch to pin 10,11,12 (IC side of the cut) on the MB 8719 PLL. This mod will give you the normal "FCC" channels in the center position. In the down position 27.605 - 28.045, In the up position 27.455 - 27.605 (on channels 2 - 14).

Expanding the Cobra 148GTL-DX/Superstar 360 Fm (PB010)

Clip off the **YELLOW, WHITE, & PINK** wires from the channel 9 panel switch. Reconnect **WHITE & PINK** together for normal LED channel display. Cut off the **GRAY** wire from the HI/LO TONE panel switch. Remove the grounding jumper at pin 9 of the MC 145 106 PLL chop. Connect a small bare wire between the center terminals of the now free poles of the CHANNEL 9 & TONE switches. Add the tow 7N914 diodes and additional wiring as shown below.

The extra frequencies will now appear in the Ch. Position of the CHANNEL SELECTOR with the BAND selector in the HIGH position.(The first 11 channels are repeats of existing channels) The "ch 9" position activates the expansion. In the LO TONE position you will get 28.195 Mhz (ch 12) to 28.495 (ch 40). If you pull IC7 pins 4 & 2 HIGH at the same times you will get up to 28.705 Mhz. This would need a three position switch.

Emperor 5010

1. Remove the four screws holding the bottom cover in place.
2. Lift the bottom cover enough to clear the case and slide it to the side while being careful not to detach the speakers wires.
3. You should now see the PLL/CPU board at the front of the radio.
4. With the front of the radio facing you, locate R539 and R540 at the lower rigth corner of the large chip (HD6140810), R539/R540 are side by side and very small.
5. Remove R539 and R540. You now will get 26.500 Mhz to 27.999 Mhz plus "FCC" band in nine bands.

Galaxy 99

1. Remove the case and find the small circuit board (E0T004410Z) connected to the left side of the radio as viewed from the component side of the main chassis.
2. Find the wire that is connected to this circuit board (in step1) Remove wire.
3. Remove small screw that holds the small board on to the chassis.
4. Under the board you will find a 7 pin plug that not connected to anything. Insert this plug into

the empty socket on the small circuit board.
5. Replace screws back into the small board and close case.

MC145106 PLL

This Pll includes the follow models…Browning Mark 4A, Dak Mark V, Robyn 440, Dak Mark IX, Lake 600, Palomar SSB500 (late), Regency CB501, CBE 54CB, Keycomm 1000

For Export Models eg. Cobra 148 GTL-DX see here

Also these UNIDEN "clones" use this chip…Connex 3300, Excalibur base, Excalibur samurai,Galaxy 2100,Galaxy II, Galaxy Pluto, Galaxy Saturn, President Franklin, Superstar 3600, Superstar 3900, Super Galaxy, Texas Star.

This PLL is getting used in a lot of newer radio's. It often has a pair of MC4008 binary adders to extend the amount of channels available.The PLL used 9 bit binary programming with internal pulldown resistors.

Modifications are possible by chanhing the programming of pin 17 (P0) to pin 9 (P8) or changing the mixing crystal.

PLL02A

The PLL02A is the worlds most popular chip used in all the Cybernet chassis. It is simple to modify by changing the binary programming or changing the loop mixing crystal. The US versions use 10 Mhz crystal, Export use 10 or 20 Mhz crystals depending on the model.

The formula for working out the new crystal is :-New Xtal = Current 10 Mhz Xtal ± (N*0.1125) or New Xtal=Current 20 Mhz Xtal + or -(N*0.225),where N is the number of 40 channel segments above or below the `legal` 40 channels.

So a crystal of (10.0525 Mhz + 0.1125 Mhz) or 10.165 Mhz would give you 40 channels starting at 27.415 Mhz etc.

Ranger RCI 2950

The only difference between the old and new versions of the RC12950 is the new CUP board.They require slightly different modifications.

OLD VERSION

The old version of the radio can be expanded from 26Mhz to 32Mhz. Although the use of the 30-32 Mhz range may need realignment

First find the PC board whit the jumpers on (behind the front panel). Then find `J2`,there is a jumper on pins P3 and P4. If this is jumper is removed you will be from 26 Mhz to 32 Mhz(re tuning may be needed to operate in 30-32Mhz range).

The CUP now needs to be reset by pressing the button located below `J2`

NEW VERSION

As the CUP board has changed the modification is different. On the CUP board there is only one jumper whit two positions avilable. In one position it covers 28 Mhz to 30 Mhz,in the other it covers 26Mhz to 30 Mhz. But if you jump all three pins together you`ll get 26 Mhz to 30 Mhz.(If this is incorrect PLEASE tell me)

Uniden HR2510

This radio can be expanded to cover 26-30 Mhz without the need to realign!

Find IC3 15 (UC1201A,UC1170,UC1250a etc) on the sythesizer board PB121BB.Then locate pins 34 and 35 on the chip, these pins are grounded on the HR2510. But on the European models like the President Lincon they are tied high(+5 Vdc).

Therefor to get the extended coverage needed these pins should be tied high. This can be done in the following way.

On the solder side of the synth board pins 34 & 35 are grouended by the same trace. With a razor blade cut this ground trace.

Now find resistor pack RR301. The left pin of this pack is unused and goes to a solder

pad. Now connect a Small jumper wire between this solder pad and pins 34 & 35 on IC3 15.

Now you should get coverage from 26.000 Mhz to 29.990 Mhz in the following banks.

Band A: 28.000 to 28.490 Mhz

Band B: 28.500 to 28.900 Mhz

Band C: 29.000 to 29.490 Mhz

Band D: 29.500 to 29.900 Mhz

Band E: 26.000 to 26.490 Mhz

Band F: 26.500 to 26.490 Mhz

Band G: 26.965 to 27.405 Mhz

Band H: 27.000 to 27.490 Mhz

Band I: 27.500 to 27.990 Mhz

Cherokee AH-100

To expand this radio to 400 channels, do the following.

1. Remove the back cover.

2. Find the small circuit board that has the PTT and UP/DOWN switches.

3. On the reverse side of this PCB look for 3 solder islands that end on the outside edge of the board.

4. Solder a bridge across all three islands.

5. Re-assemble radio.

6. Then do the following...

If the radio has been used before you will need to remowe the battery and the power switch ON short out the supply terminals for about a day. This will cause the processor to clear it`t self.

Make sure the power switch is on hold the receiver but no display, release the CH9 button and the display should reappear.

Now using the CH9 button you should be able to select 10 bands of 40 channels (A thru J). Now whenever you power up the radio with the CH9 button held down you`ll get 400 channels.. If you do not hold the CH9 button down you will get the standard 40 channels.

Midland 79-290

To set radio foe 240 channel mode press and hold "DW" and "9" then turn radio on.. Select bands by using the "19" button.

To ste radio for 28Mhz to 29.7 Mhz press and hold "LCR" and "eMIC"e then turn radio on. To switch back to 40 channel mode repeat process.

Power Tweaks

0 MB8719 PLL

0 Cobra 148GTL-DX(late)/Superstar 360FM

0 Cobra HH-40

0 PLL 02A

0 Ranger RC12950

0 Variable Power for cobra 25/29 LTD

MB8719 Power

Cobra 148/2000GTL

President(Uniden) `Grant`/`Madison` (new)

L38, TR24-AM, VR11-SSB, VR12-AM PWR

Cobra 140/142GTL

Courier Galaxy

Midland 79-900

President `Washington`/`McKinley`(new)

Realistic TRC450/490

Robyn SB505D(new version)

SBE LCMS-8, LCBS-8

Superstar 360

Teaberry Stalker IX, XV, XX

Tram D80, D300

L36, TR32-AMC, VR7-SSB PWR, VR6-AM PWR

Cobra 46/47XLR, 50/55XLR

Midland 63-445

L112, L109, VR105

Cobra 148 GTL-DX/Superstar 360FM Power

This is for the cobra 148 GTL-DX late model only (PB010AB)

L44, VR-13-AM PWR, TR32-AMC, VR12-ALC, VR5-FM DEV

Cobra HH-40 Handheld Radio

This handheld radio uses the LC7230 PLL, But as it is all surface mount components this mod should only be tackled by persons who feel confident to do so :)..

Summery of mods :- RV-201 - `S` meter adjust, RV-301-`TX` meter adjust..

Am power :-L304,L305,L306,L307

Modulation (This is the hard part)..

Remove R243 (2K2 surface mount, marked `222`, black in color, just above the marking `R243`

Remove C225 (0. 22uF surface mount, no number, tan in color, just below C226, which, in turn is just belowe the `C226` marking.

Component Access And Identification

1. Remove the front and rear covers (4 screws). The frint cover (with the speaker) stays attached by the speaker and mic leads.
2. On the back by the rear circuit board, you will find RV201 and RV301, and all the inductor coils, all are identified with numbers printed on the circuit board.
3. On the front circuit board (the side with the LCD facing you), desolder the 4 pads that ground the front circuit board to the case. Two of these have tangs that must be bent poen to release the board. Remove the two screws on either side of the LCD (friction fit only). Fold the front circuit board over and out of the way exposing the front face of the rear board.
4. Orient the unit horizontally with the antenna jack facing to your left and the bottom of the transformer visable on the right. The printed component numbers should read right -side-up.Locate the markings `R243` and `C226` in the area near the lower -left corner of the transformer.
5. Remove R243, which is black in color, vertically orientated, just above the marking`R243` and to left of the `Q205` marking. It has `222` marked on it.

6. C225 is not marked. Start by finding C226, which is a horizontally orientated, tan component located just below the `C226` marking. DO NOT DISTURB C226.

PLL02A Power

AM only using L7, L11, L12, RV2-AMC

Bowman CB910, 920, 930, CBH990

Colt 290, 390, 800, SX33

Delco(GM) 1987 series

Gemtronics GT44, GT55, GTX66

GE 3-5804D, 5811B, 5812A, 5813B, 5814B, 5819A

Ham Int`l 8040 W/T

HyGain 2702, 2703

Jc Penny 981-6204, 6218

Kraco KCB4010, 4020, 4030, 4045, 5001

Lafayette HB640, HB740, HB940

Telsat 1140, LM100, LM300

Comstst 525

Midland 76-858, 76-863, 77-830, 77-838, 77-849, 77-857. 77-888, 77-889, 77-899, 77-955, 77-963

Medallion 63-030

Mopar 4094176, 4094177, 4094178

Morse/Electrophonics 3005

Palomar 4100

Pearce-Simpson Lion 40, tiger 40

Ray Jefferson CB845

RCA 14T260, 270, 275, 303, 304, 305

Truetone CYJ4832A-87, 4834A-87, 4862A-87

AM only using L106, L109, L110, RV102-AMC

23 Channel :

Delco (GM) 1977 series, CBD-10

GE 3-5810B

HyGain 2680, 2681, 2683, 2679

Krayco KCB2320B, 2330B

Lafayette HB650, HB750, HB950, Telsat 1050, COm-Phone 23A, Micro 223A

Midland 13-830, 13-857B, 13-882C, 13-888B, 13-955

Pearce-Simpson Tiger Mark 2

RCA 14T300, 14T301

Truetone MCC4434B-67, CYJ4732A-77

40 channel:

HyGain 2679A, 2682, 2701, 2710X

Pearce-Simpson tiger 40A

SSB w/PTBM048A0X main bd.

L7, L11, L13, RV12-AMC, RV2-ALC, RV11-SSb MIC GAIN, VR4-AM PWR

Bowman CB950

Colt 480, 485, 1000, 1200, 485DX

Gemtronics GTX77

GE 3-5825A

HyGain 2705(V), VIII(3108), 2785

Jc Penny 981-6247

JIL SSB-M6, MPL-5

LAFAYETTE tELSAT SSB-140, 1200FM

Major 360

Midland 78-976, 79-892

Palomar 2900

RCA 14T302

Truetone CYJ4837A-87

RC12950 Power

VR14-AMC

L34, L13, L14, L16-AM Power

VR13-AM High power

VR15-AM Low power

VR12-SSB high power ALC

VR16-SSB low power ALC

Variable power for cobra 25 & 29LTD

Cobra 25 LTD

Find and remove C70 & JP6(near Final).

Disconnect ORANGE and BROWN wires from the RF Gain Control, then connect these wires together.

Install Q1 (see diagram) where JP6 was. The right leg(emitter) of Q1 in the hole near the final. The Centre leg(collector) in the other hole.

Solder a wire from the left leg(base) of Q1 to the center tag of the RF Gain Control.

Remowe VR5(near transformer)

Connect the last tag of the RF Gain Control to a 100ohm resistor and solder to L6 pot.

Solder a wire from the upper tag of the RF Gain Control to the top connection of VR5 (already removed)

Cut D9 out fo the circuit (this is the clipping Diode)

Put plenty of heat sink compound into the tab of Q1, then using the proper mounting hardware mount to heat sink (make sure that the tab of Q1 is insulated from the heat sink)

Follow instructions for cobra 25LTD, except remove C73 &JP36 instead of C70&JP6, remove VR4 instead of VR5, Also cut D11 insead of D9.

Q1=TIP120(Radio Shack), capacitor = 22 uF 25 V

Back

Last updated Aug 2001 by Inge Hagen